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			2836	

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/705,963

**Applicant(s)**

FUJIMOTO ET AL.

**Examiner**

Hal I. Kaplan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 November 1303.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/13/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "till", "beforehand detected", "air/fuel ration sensor heater", "turned into", "door-knob", "a starter is to be started for starting", "a condition is that", "an amount of stepping", "no prediction of the engine start can be avoided", and "be also used as a combination with another embodiment within the embodiments".

3. The disclosure is objected to because of the following informalities:

Page 1, line 25 contains the word "till". It appears this should be "until". Page 2, lines 21-23 contain the phrase "pre-start state enables notification ... such as a maintenance shop". It appears this should read "pre-start state enables the driver to be notified of the anomaly, or the anomaly to be output into a terminal to be referred to by a

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maintenance shop". Page 2, line 21 contains the word "situation". It appears this should be "situations". Page 3, line 27 through page 4, line 1 contain the phrase "receives, as information of an engine ... cooling water temperature 29". It appears this should read "receives signals indicating cooling water temperature 29". Page 4, line 3 contains the phrase "via a main relay". It appears this should read "of an engine of a vehicle, via a main relay". Page 4, lines 7-8 contain the phrase "when an air/fuel ration ... start". It appears this should read "when the air/fuel ratio sensor (not shown) remains at a low temperature at the time the engine is started". Page 4, line 10 contains the phrase "thereby executed ... that restricting". It appears this should be "executed ... restricting". Page 4, lines 14-15 contain the phrase "executed with ... sensor till". It appears this should be "executed using a heater until". Page 4, line 23 contains the phrase "preparation operations (to engine start)". It appears this should be "preparation operations". Page 4, line 24 contains the phrase "the preparation". It appears this should be "a preparation". Page 4, lines 25-27 contain the phrase "the ECU 1 ... engine start". It appears this should read "the ECU 1 controls the air/fuel ratio sensor heater 10 for warming-up the engine until the engine starts".

Page 5, line 3 contains the phrase "ignition insertion". It appears this should be "ignition key insertion". Page 5, lines 4, 5, 7, and 10 contain the phrase "turned into". It appears this should be "switched to". Page 5, lines 6 and 8 contain the word "door-knob". It appears this should be "door-handle". Page 5, lines 12-13 contain the phrase "in a case ... fails". It appears this should read "in the case where a detection function fails". Page 5, lines 15-16 contain the phrase "to be switched into the START position".

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It appears this should be "to the START position". Page 5, line 16 contains the phrase "namely, the". It appears this should be "the". Page 5, line 17 contains the phrase "so that the". It appears this should be "so the". Page 5, lines 26-27 contain the phrase "step 100". It appears this should be "step S100". Page 6, line 6 contains the phrase "terminated with bypassing". It appears this should be "terminated, bypassing". Page 6, lines 6, 8, 23, and 26 contain the phrases "step 101", "step 110", and "step 111". It appears these should be "step S101", "step S110", and "step S111". Page 6, lines 8-12 contain the phrase "here, since it is ... then terminated". It appears this should read "Here, since it is assumed that a preparation is detected, a pre-heat trigger signal indicating the start of heating of an air/fuel ration sensor (pre-heating) is output. The routine is then terminated." Page 6, lines 14 and 15 contain the phrase "turned into". It appears this should be "switched to". Page 6, line 17 contains the phrase "power of". It appears this should be "power from". Page 6, line 19 contains the word "thereby". It appears this should be "then". Page 6, lines 20 and 24 contain the word "trigger". It appears this should be "trigger signal". Page 6, line 21 contains the phrase "in the next place ... main relay". It appears this should read "next, the processing executed by main relay". Page 6, line 22 contains the phrase "executes for starting". It appears this should read "for starting". Page 6, line 26 contains the phrase "an ignition switch". It appears this should be "the ignition switch".

Page 7, lines 3, 4, 11, 13, 18, 20, and 24 contain the phrases "step 112" through "step 124". It appears these should be "step S112" through "step S124". Page 7, line 6 contains the phrase "for a period till". It appears this should be "until". Page 7, lines 7-8

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contain the phrase "a starter ... of pre-heating". It appears this should read "the engine is started based on the state of pre-heating". Page 7, line 9 contains the phrase "processing of". It appears this should be "the processing performed by". Page 7, lines 16, 17, 19, and 25 contain the words "elapses" and "does not elapse". It appears these should be "has elapsed" and "has not elapsed". Page 8, lines 4 and 6 contain the phrases "step 121" and "step 125". It appears these should be "step S121" and "step S125". Page 8, lines 11-12 contain the phrase "start is awaited till". It appears this should be "does not start until". Page 8, lines 18-20 contain the phrase "however, when the pre-heating ... given period". It appears this should read "however, the pre-heating is stopped after the given period, even if the engine is not yet started". Page 8, lines 22-25 contain the phrase "in the next place, ... FIG. 5". It appears this should be "next, the processing for diagnosing a failure of a function ... engine start will be explained with reference to FIG. 5".

Page 9, lines 2, 9, 11, 15, 22, 24, 25, and 26 contain the phrases "step 130" through "step 151". It appears these should be "step S130" through "step S151". Page 9, line 3 contains the phrase "vehicle speed 21". It appears this should read "vehicle speed". Page 9, line 4 contains the phrase "equal to a given period or above". It appears this should read "greater than or equal to a given period". Page 9, lines 4-5 contain the phrase "a speed ... not stop". It appears this should read "any positive speed". Page 9, line 7 contains the phrase "not less". It appears this should be "greater than or equal to". Page 9, line 9 contains the phrase "processing proceeds". It appears this should be "processing then proceeds". Page 9, line 14 contains the phrase "the

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driver ... not seated". It appears this should read "no driver ... seated". Page 9, line 17 contains the phrase "in the next place". It appears this should be "next". Page 9, line 18 contains the phrase "not seated on a seat". It appears this should be "not seated". Page 9, line 19 contains the phrase "to fail". It appears this should be "to have failed". Page 9, line 23 contains the phrase "while it". It appears this should read "if the ignition switch 4". Page 9, line 24 contains the phrase "the processing at Step 150". It appears this should read "Step S150". Page 9, line 27 contains the word "when". It appears this should be "if".

Page 10, lines 1, 3, 4, 7, 8, 9, 12, 14, 19, 20, 23, and 25 contain the phrases "step 151" through "step 156". It appears these should be "step S151" through "step S156". Page 10, line 4 contains the word "through". It appears this should be "via". Page 10, line 6 contains the phrase "not opened nor closed". It appears this should be "neither opened nor closed". Page 10, lines 10, 11, and 12-13 contain the phrases "a door-lock is executed" and "the door-lock is not executed". It appears these should be "a door is locked" and "no door is locked". Page 10, line 15 contains the phrase "in the processing ... Step 154, usual". It appears this should read "in steps S150-S154, normal". Page 10, line 16 contains the phrase "executes from ... engine to". It appears this should read "executes, such as ... engine or". Page 10, line 17 contains the phrase "vehicle are determined". It appears this should read "vehicle, are detected". Page 10, line 18 contains the phrase "the door-lock ... executed". It appears this should read "a door ... locked". Page 10, line 19 contains the word "never". It appears this should be "presumed not to be". Page 10, line 20 contains the word "through". It appears this

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should be "via". Page 10, line 22 contains the phrase "to be not". It appears this should be "not to be".

Page 11, line 2 contains the phrase "is therefore needed". It appears this should be "therefore needs". Page 11, lines 3-4 contain the phrase "from stopping ... of the ECU 1". It appears this should read "from the time the engine is stopped by the driver until the ECU 1 is stopped". Page 11, lines 6, 8, 9, 11, 14, 20, and 22 contain the phrases "step 140" through "step 143". It appears these should be "step S140" through "step S143". Page 11, line 7 contains the phrase "an OFF position". It appears this should be "the OFF position". Page 11, line 8 contains the phrase "the processing at Step 140". It appears this should read "step S140". Page 11, line 13 contains the phrase "the failure". It appears this should be "if the failure". Page 11, line 15 contains the phrase "a given period ... starts". It appears this should read "a given time period has elapsed ... started". Page 11, line 18 contains the phrase "without a stop". It appears this should read "without the ECU 1 stopping". Page 11, lines 19-21 contain the phrase "when the given period ... diagnosis". It appears this should read "when the given period has not elapsed, step S142 is repeated until completion of the failure diagnosis". Page 11, line 21 contains the word "elapses". It appears this should be "has elapsed". Page 11, lines 22-23 contain the phrase "compulsorily ... preventing". It appears this should read "stopped in order to prevent". Page 11, line 26 contains the phrase "operation ... seat switch". It appears this should read "operation before the engine is started is detected based on the position of the seat switch". Page 11, line 27 through page 12, line 2 contain the phrase "here, in a case ... on a seat". It appears



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this should read "here, in the case where the seat switch 9 is fixed in an ON or OFF state due to a failure, ... on a seat".

Page 12, lines 2-4 contain the phrase "the failure ... seat switch 9". This is not proper idiomatic English, and it is not clear. Page 12, line 5 contains the phrase "relating to". It appears this should be "causing". Page 12, line 6 states that "no prediction of the engine start can be avoided". This is not proper idiomatic English, and it is not clear what this means. Page 12, line 7 contains the phrase "not thereby started". It appears this should read "thereby prevented from starting". Page 12, lines 8-9 contain the phrase "restricting deteriorating". It appears this should be "restriction". Page 12, line 12 contains the phrase "a vehicle speed 21". It appears this should read "the vehicle speed". Page 12, line 13 contains the phrase "step 130". It appears this should read "step S130". Page 12, lines 1;7, 19, 21, 23, 25, and 26-27 contain the phrase "a condition is that". It appears this should be "whether". Page 12, lines 18, 20, 21, 23, 26, and 27 refer to quantities by reference numbers. These should not have reference numbers because they are not parts. Page 12, lines 19, 20-21, 23, 24-25, and 26 contain the phrase "is equal to ... or above". It appears this should read "is greater than or equal to". Page 12, line 20 contains the phrase "to the engine". It appears this should read "into the engine". Page 12, lines 26-27 contain the phrase "a condition ... brake pedal". It appears this should read "whether the deceleration".

Page 13, lines 1 and 2-3 contain the phrase "equal to ... or above". It appears this should read "greater than or equal to". Page 13, lines 1-6 contain the phrase "a condition is that ... plural conditions". It appears this should read "whether the

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depression of the clutch pedal by the driver is greater than or equal to a given amount.

The above conditions can be used individually or in combination". Page 13, lines 1-6

are not in proper idiomatic English. Page 13, line 8 contains the phrase "anomaly of". It

appears this should be "an anomaly of". Page 13, line 10 contains the phrase "in a

case". It appears this should be "in the case". Page 13, line 11 contains the phrase

"may malfunction". It appears this should be "malfunctions". Page 13, line 16 contains

the phrase "mistakenly diagnosing". It appears this should be "mistaken diagnosis".

Page 13, lines 24-25 contain the phrase "and anomaly". It appears this should be "and

an anomaly". Page 13, line 26 contains the phrase "a vehicle". It appears this should

be "the vehicle".

Page 14, lines 2 and 16 contain the phrase "being operated". It appears this should be "in operation". Page 14, lines 3, 4, 5, and 9 contain the phrases "in an ON"

and "in a START". It appears these should be "in the ON" and "in the START". Page

14, line 3 contains the phrase "namely, when". It appears this should be "when". Page

14, lines 6-8 contain the phrase "a function of detecting ... be normal". This is not

proper idiomatic English and is not clear. Page 14, lines 9-10 contain the phrase

"neither in ... START position". It appears this should read "in the OFF position". Page

14, lines 11-12 contain the phrase "a function of detecting ... be abnormal". This is not

proper idiomatic English and is not clear. Page 14, lines 13-15 should be removed as

they are repetitive of the preceding paragraph. Page 14, lines 17-18, 19, 21, 22-23, 25,

and 27 contain the phrase "a condition is that". It appears this should be "whether".

Page 14, lines 18, 19, 21, 23, 25, and 27 refer to quantities by reference numbers.

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These should not have reference numbers because they are not parts. Page 14, lines 18-19, 20-21, 22, 24-25, and 26-27 contain the phrase "is equal to ... or above". It appears this should read "is greater than or equal to". Page 14, line 22 contains the phrase "to the engine". It appears this should read "into the engine".

Page 15, lines 1, 2-3, and 4 contain the phrase "equal to ... or above". It appears this should read "is greater than or equal to". Page 15, lines 1 and 3 contain the phrase "a condition is that". It appears this should be "whether". Page 15, lines 1-3 contain the phrase "an amount ... or above". It appears this should read "a deceleration is greater than or equal to a given amount". Page 15, line 3 contains the phrase "an amount of stepping of a ". It appears this should read "the pressure on the". Page 15, lines 11, 13, 22, 23-24, 24, and 26 contain the word "door-knob". It appears this should be "door-handle". Page 15, line 13 contains the phrase "an ON and OFF". It appears this should read "ON and OFF". Page 15, lines 14, 18, and 24 contain the word "anomaly". It appears this should read "an anomaly". Page 15, lines 20-22 contain the phrase "the door opening/closing ... switch 7". It appears this should read "the status of the door-handle manipulation switch 7 can be used instead of the door opening/closing switch 8". Page 15, line 22 contains the phrase "namely, a preparation". It appears this should be "a preparation". Page 16, lines 3-4 contain the phrase "conducted on a function". It appears this should read "conducted based on a function". Page 16, line 9 contains the phrase "FIGS. 5, 6". It appears this should be "FIGS. 5 and 6". Page 16, lines 11-12 contain the phrase "repeatedly continued till ... eventually completed". It appears this should be "continued until ... completed". Page 16, line 22 contains the word "catalyst".

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It appears this should be "catalytic". Page 17, lines 1-2 contain the phrase "be also used ... within the embodiments". It appears this should read "be used in combination with another embodiment".

Appropriate correction is required.

4. The disclosure is objected to under 37 CFR 1.71(a) because it is not sufficiently enabling.

Page 9, lines 2-5 state that it is determined whether the period for which the vehicle speed exceeds a given speed, wherein the given speed can be "a speed at which a vehicle does not stop". This means that the given speed can be any positive (nonzero) speed, and is therefore unlimited. One of ordinary skill in the art would not be able to make and/or use the invention if the given speed was unlimited. The invention will not work properly if the given speed is too high, because a reliable time period measurement cannot be obtained due to the period during which the vehicle exceeds a very high given speed being very short. The higher the given speed, the shorter will be the period during which the vehicle exceeds the given speed.

Page 5, lines 6-9 state that the door-handle manipulation switch 7 is switched on when a door handle is opened, and the door opening/closing switch 8 is switched on when a door is opened. Page 15, lines 14-18 state that an anomaly of the door opening/closing switch is determined when signals from the door opening/closing switch are not detected at a time when signals from the door-handle manipulation switch are detected. It is not clear to the examiner what this means. Opening a door handle and opening a door are the same; therefore, switches 7 and 8 appear to perform the same

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function. It is not clear why two switches that perform the same function would be needed. If this is not the case, and the door-handle manipulation switch detects a user merely lifting the door handle to open the door, without regard to whether the user actually opens or closes the door, while the door opening/closing switch detects whether the user actually opens or closes the door, the invention will not work properly because vehicle doors are frequently activated by remote control. One of ordinary skill in the art would not be able to make and/or use the invention in a vehicle with doors that have locks that can be controlled remotely because unlocking/opening the doors by remote control will trigger the door-handle manipulation switch but not the door opening/closing switch, thereby causing the system to malfunction and detect an anomaly when there is no anomaly.

5. The disclosure is objected to under 37 CFR 1.71(b) because it does not completely describe a specific embodiment of the invention.

Throughout the specification and claims, reference is made to "given" quantities, such as vehicle speed and count. It is not clear how the "given" quantities are set so that the system can perform the relevant comparisons.

Page 4, lines 7-9 state that when the air/fuel ratio sensor remains at a low temperature at the time the engine is started, feedback control cannot be executed even after the engine is started. It is not clear what the air/fuel ratio, or the sensor that senses this ratio, has to do with the feedback control, or why keeping the sensor at a low temperature prevents feedback control from being executed.

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Page 6, lines 13-14 state that processing is executed "through hardware structure". The specification does not identify or describe the hardware structure or how the processing is executed.

Page 6, lines 9-10 and 19-20 refer to a pre-heating trigger signal that is inputted, but the specification does not state where this signal comes from or how it is generated.

Page 9, lines 11-16 state that "it" is "normal" if the driver is seated while the vehicle is traveling, and "it" is "abnormal" if the driver is not seated. The specification does not define what "it" is, or what is meant by "normal" and "abnormal".

Page 9, lines 26-27 state that at step S151, it is determined whether the ignition key is "drawn off" from the ignition insertion switch. The phrase "drawn off" is not defined.

Page 12, lines 11-13 state that in step S130, whether a driver is operating the vehicle is determined by whether the speed exceeds a given speed. This is not what is determined at step S130. At step S130, it is determined whether the period of time for which the vehicle speed exceeds the given speed is greater than or equal to a given period of time (see page 9, lines 2-4 and Figure 5).

Page 12, lines 24 and 25-26, and page 14, lines 25 and 27 refer to an "opening degree" of an accelerator or throttle. The phrase "opening degree" is not defined, and it is not clear to the examiner what is meant.

Page 13, line 15 states that the anomaly of the seat switch is "finally" determined. The specification does not define "finally" or a "final anomaly", and it is not clear how this differs from anomaly.

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Page 13, lines 19-21 refer to an anomaly counter that is incremented while the anomaly is being detected. It is not clear what is being counted or how. The "anomaly counter" appears to be merely a delay element.

Page 14, lines 3-4 use the reference numeral "5" to designate both the ignition key insertion switch and the ignition key.

Page 14, lines 8-11 state that when the ignition key insertion switch is ON and the ignition key is in the OFF position (neither ON nor START), the ignition key insertion switch is abnormal. However, it is clearly possible to have the ignition key inserted, thereby turning the ignition key insertion switch ON, without starting the vehicle (ignition key in the OFF position) (see page 5, lines 3-5, and claim 6). This appears to be normal.

Page 16, lines 9-12 state that in the sixth modification, processing of the failure diagnosis can be continued until the diagnosis is completed. It is not clear how this distinguishes the sixth embodiment from the previous embodiments because in all embodiments, the diagnosis must be able to finish, or the invention has by definition not functioned properly.

### ***Drawings***

6. The drawings are objected to because of the following informalities: in Figure 1, switches 21-30 should be shown as separate switches because they are referred to individually in the specification (see page 12, line 11 through page 13, line 3).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement

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drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "31," "32," "33," and "34" have all been used to designate the heater of the seventh modification (see page 16, lines 16-26 and Figure 1).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required



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corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

8. Claims 1, 3-11, 13, and 14 are objected to because of the following informalities:

Claim 1, line 2 contains the phrase "engine of internal combustion". It appears this should read "internal combustion engine". Claim 1, lines 7-8 contain the phrase "operation aimed for a start". It appears this should read "operation for a start". Claim 1, lines 8-9 contain the phrase "beforehand executes". It appears this should be "executes". Claim 3, line 5 contains the word "drive". It appears this should be "driver". Claim 4, lines 3-5 contain the phrase "one of eight conditions included ... is effected". It appears this should read "one of eight conditions detected by the vehicle state detecting means is satisfied". Claim 4, line 5 contains the phrase "detects the anomaly". It appears this should be "detects an anomaly". Claim 4, lines 8, 10, 12-13, 16, 18-19, 21-22, 24-25, and 27-28 contain the phrase "equal to ... or above". It appears this should be "greater than or equal to". Claim 4, line 12 contains the phrase "air that is sucked to". It appears this should be "air that is sucked into". Claim 4 lines 12-13, the phrase "a third amount" lacks proper antecedent basis. Claim 4 line 16, the phrase "a fourth pressure" lacks proper antecedent basis. Claim 4 line 18, the phrase "a fifth degree" lacks proper antecedent basis. Claim 4 line 21, the phrase "a sixth degree" lacks proper antecedent basis. Claim 4, lines 23-24 contain the phrase "an amount of stepping of a brake pedal". It appears this should be "a deceleration". Claim 4 line 24, the phrase "a seventh amount" lacks proper antecedent basis. Claim 4, lines 26-27 contain the

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phrase "an amount of stepping of a clutch pedal". It appears this should read "the depression of a clutch pedal by a driver". Claim 4 lines 27-28, the phrase "an eighth amount" lacks proper antecedent basis.

Claim 5, line 4 contains the phrase "detects the anomaly". It appears this should be "detects an anomaly". Claim 6, line 4 contains the phrase "insertion switch of an ignition key". It appears this should read "insertion switch". Claim 6, lines 6-7 contain the phrase "is being inserted or not". It appears this should be "is inserted or not". Claim 7, lines 3-5 contain the phrase "one of ten conditions ... is effected". It appears this should read "one of ten conditions detected by the vehicle state detecting means is satisfied". Claim 7, line 6 contains the phrase "detects the anomaly". It appears this should be "detects an anomaly". Claim 7, lines 9, 11, 13-14, 17, 19-20, 22-23, 25-26, and 28-29 contain the phrase "equal to ... or above". It appears this should be "greater than or equal to". Claim 7, line 13 contains the phrase "air that is sucked to". It appears this should be "air that is sucked into". Claim 7 lines 13-14, the phrase "a third amount" lacks proper antecedent basis. Claim 7 line 17, the phrase "a fourth pressure" lacks proper antecedent basis. Claim 7 line 19, the phrase "a fifth degree" lacks proper antecedent basis. Claim 7 line 22, the phrase "a sixth degree" lacks proper antecedent basis. Claim 7 line 25, the phrase "a seventh amount" lacks proper antecedent basis. Claim 7 lines 28-29, the phrase "an eighth amount" lacks proper antecedent basis.

Claim 8, lines 5-6 contain the phrase "an operation state ... the vehicle". It appears this should read "whether a door of the vehicle is open or closed". Claim 9, line 6 contains the phrase "given time at which a door knob". It appears this should read "a

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given time at which a door handle". Claim 9, line 8 contains the phrase "detects the anomaly". It appears this should be "detects an anomaly". Claim 10, lines 3, 4, and 5, and claim 11, line 5, contain the word "door-knob". It appears this should be "door-handle". Claim 11, lines 5-6 contain the phrase "including given time". It appears this should read "including a given time". Claim 11, line 8 contains the phrase "detects the anomaly". It appears this should read "detects an anomaly". Claim 13, lines 3 and 5 contain the word "count". It appears this should be "counter". Claim 13, line 3 contains the word "pres-start". It appears this should be "pre-start". Claim 14, line 8 contains the word "catalyst". It appears this should be "catalytic".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

11. Claims 2-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because it is not completely clear what is being claimed.

Claim 2 recites the limitation "vehicle state detecting means for detecting a

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vehicle state". It is not clear from the specification and drawings what specifically comprises the pre-start state detecting means, anomaly detecting means, and vehicle state detecting means, i.e. what the "means" are, and how they are distinct. In addition, if the vehicle is in the pre-start state (the pre-start state detecting means detects the pre-start state), then the vehicle is off, and all of the values (conditions) sensed by the vehicle state detecting means will be zero, so the system will not work as intended.

Claims 3-11 inherit this deficiency.

Claim 5 recites the limitation "when the ON-signal of the driver seat switch is not detected and it is detected that the driver retires from the vehicle, the anomaly detecting means detects the anomaly". This does not describe an anomaly. When the driver retires from the vehicle, the ON-signal of the driver seat switch is not supposed to be detected (see Specification, page 5, lines 9-11).

Claims 12 and 13 recite the limitation "the anomaly detecting means diagnoses the pre-start state detecting means with a final anomaly". The specification does not clearly define what a "final anomaly" is.

Claim 13 recites the limitation "the anomaly detecting means continuously increments a count while the anomaly ... is being detected, and wherein, when the count exceeds a given count, the anomaly detecting means diagnoses ... a final anomaly". It is not clear from the specification what is being counted. It appears the counter is acting merely as a delay element to delay diagnosis of a final anomaly for a predetermined period of time; i.e. the length of time it takes for the counter to exceed the given count.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by the US patent of Iwatani et al. (6,629,512).

Iwatani, drawn to an internal combustion engine with heat accumulating device, teaches a system read on the claimed system, comprising: warming-up means (21) for executing warming-up of an engine (10) (see column 9, lines 56-56 and 64-67); pre-start state detecting means (22a,23a,25a,26,27,27a,28) for detecting a pre-start state by detecting a preparation for a start of the engine (10), wherein the warming-up means (21) executes the warming-up prior to the start of the engine when the pre-start state detecting means (22a,23a,25a,26,27,27a,28) detects the pre-start state (see column 6, lines 45-58 and 66-67, and column 7, lines 10-17); and anomaly detecting means for detecting an anomaly of the pre-start state detecting means (see column 4, lines 33-55 and column 21, lines 2-3 and 5-8).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwatani in view of the US patent of Ajima (5,845,624).

Iwatani teaches all of the claimed features, as set forth above, except for the warming-up means executing the warming-up by controlling an electric current. Ajima, drawn to an air-fuel ratio control system for internal combustion engine, discloses a warming-up means which executes a warming-up by controlling an electric current flowing through a heater provided in a catalytic converter provided in the exhaust gas path for purifying harmful gas (see column 20, lines 12-16). It would have been obvious

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to one of ordinary skill in the art, at the time of the invention, to build an internal combustion engine with warming-up means provided by a heater in a catalytic converter, rather than through a system that uses heat generated by the engine itself, in order to use less space under the hood and reduce harmful emissions.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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